

# **Where do Trajectories Diverge? Nativity and Ethnic Differences in Home Environment and Early Cognitive Development**

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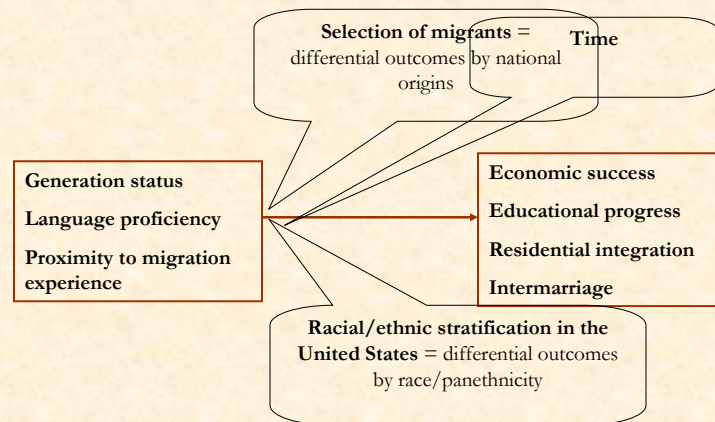
## **Theoretical Frameworks:**

- **Assimilation**



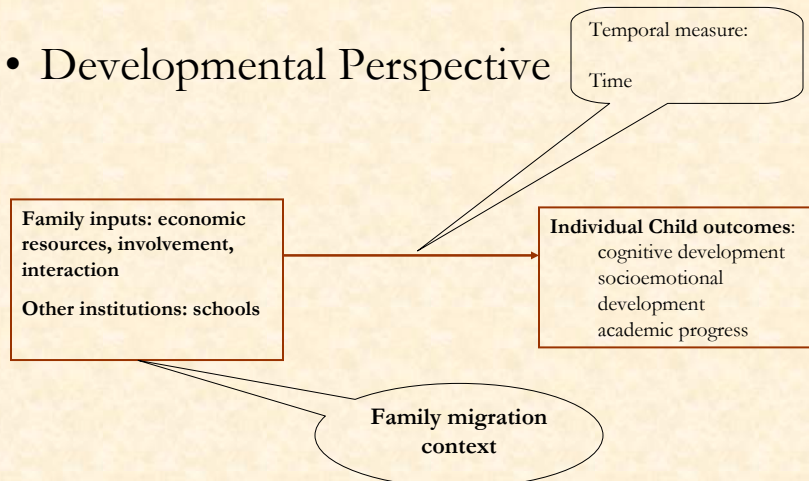
## Theoretical Frameworks:

- Segmented or Divergent Assimilation



## Theoretical Frameworks:

- Developmental Perspective



## **Research Questions:**

- Are the antecedents of divergent outcomes for children of immigrants found in the characteristics of the home environment, access to resources and parenting practices?
  - What is the influence of home environment on outcomes for second generation children in early childhood?
  - To what extent does parents' age at arrival in the United States help explain diverse outcomes for the new second generation?

## **Background....**

- Research on the “new” second generation faces the difficult task of exploring the origins of their possible “divided fates”
  - The link to immigration cannot be completely dichotomized
- Parents' age at arrival may account for differences in parenting practices
  - US parenting styles vs. parenting styles from the country of origin.

## **Background....**

- Children's outcomes may be associated with those characteristics subsumed under parental nativity
  - language background
  - national origins
  - generation status/age at arrival in the U.S.
  - race/ethnicity
- New datasets provide increasingly good data for the study of children from very diverse backgrounds

## **Hypotheses**

- Family resources and access to external resources will mediate the relationships between race, ethnicity and mother's nativity and the child's cognitive outcomes over time.
- Home environment will moderate the relationship of cognitive development and mother's nativity.
- Mother's age at arrival in the United States will be associated with cognitive development.
  - Positive association = protective environment
  - Negative association = US socialization advantage

## Data and Methods:

- Early Childhood Longitudinal Study-Birth Cohort (ECLS-B), waves 1 and 2.
  - Large, representative sample of children born in 2000
  - Ethnically diverse sample with many children from immigrant families.
  - Bilingual interviews (Spanish and Mandarin) and translators for interviews (Cantonese or Vietnamese).
  - Detailed Information on Child Cognitive, Motor and Socio-emotional development from infancy through early childhood.

## Children's cognitive development:

- **Regression models predicting cognitive development at wave 2**
  - Children are approximately 24 months old.
- **Bayley assessment of cognitive development**
  - including memory, exploratory competence, object permanence and communication
- **Missing Data**
  - Results with multiple imputation substantively similar to those dropping lost cases.

## Data and Methods:

- **Predictors (from wave 1):**

- **Child Characteristics**

- Age, sex, birth weight, previous cognitive scores, mother's age
    - Language of assessment

- **Characteristics associated with mother's nativity**

- Home language, race/ethnicity, age at arrival

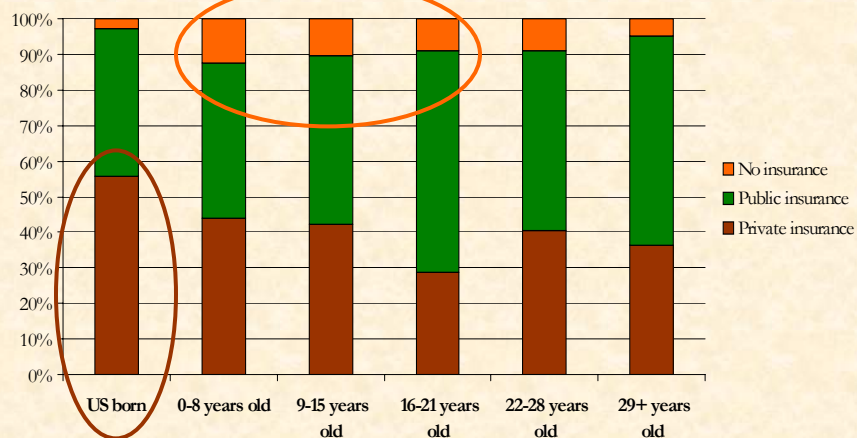
- **Home Resources**

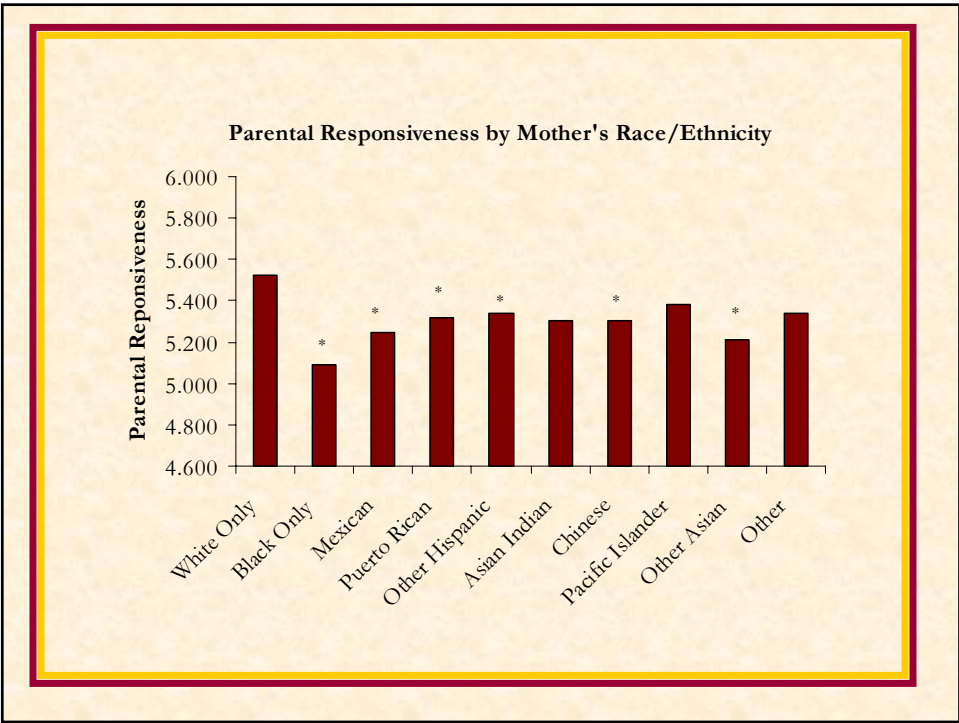
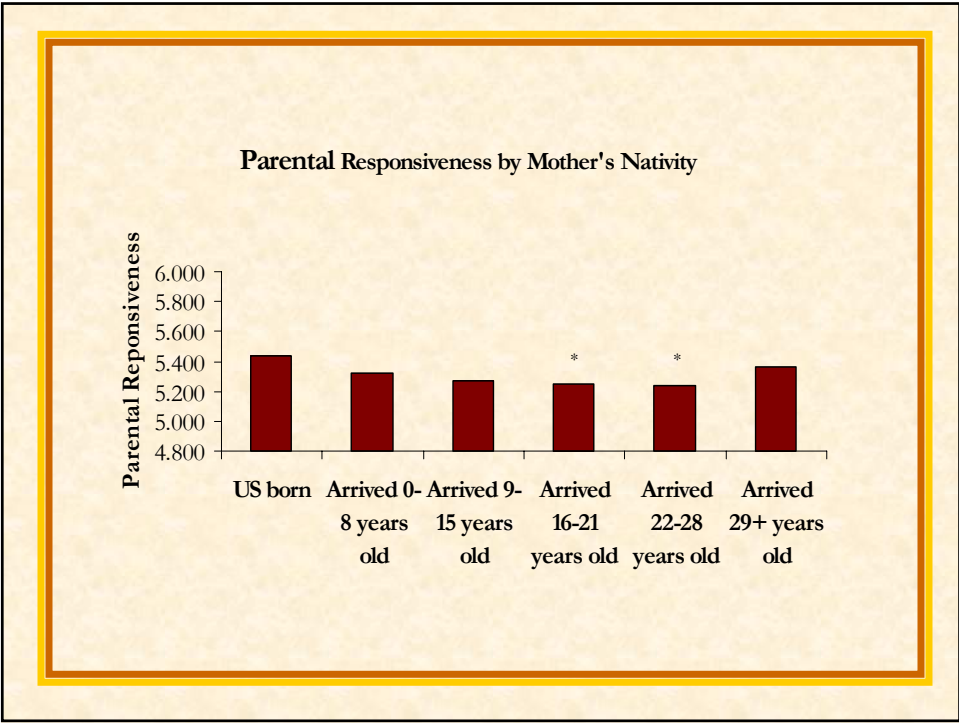
- Mother's education, family income, mother's employment status, health insurance status, family structure, number of older siblings

- **Home Environment**

- Parental play scale, parental responsiveness scale, frequency of reading to child.

Children's Health Insurance Coverage by Mother's Age at Arrival







## Regression Results:

- Children's own characteristics are associated with cognitive development
  - Low birth weight is significantly associated with lower scores
  - Cognitive development at wave 1 is associated with scores at wave 2

### Regression of Standardized 24 Month Mental Scale Score with Mother's Age at Arrival

	Model 1	Model 5
Child' Characteristics	$\beta$	$\beta$
Female	0.303 ***	0.313 ***
Child's age at Wave 1	-0.087 ***	-0.065 ***
Interviewed in home language	0.317 ***	0.050
Moderate birthweight	-0.267 ***	-0.232 ***
Low birthweight	-0.595 ***	-0.570 ***
Standardized Wave 1 Mental Scale score	0.296 ***	0.238 ***
Intercept	0.090	0.064
<b>R<sup>2</sup></b>	0.106	0.216

Source: Early Childhood Longitudinal Study-Birth Cohort, waves 1-2 and lost to follow up between waves 1 and 2.



## Regression Results:

- Children with foreign born mothers have lower scores than children with US born mothers:
  - Racial/ethnic variation is significant but reduced when home resources are controlled
  - Effect of mother's age at arrival is not linear.
  - Non-English home language associated with lower scores.

Regression of Standardized 24 Month Mental Scale Score with Mother's Age at Arrival

	Model 3 $\beta$	Model 5 $\beta$
<b>Primary Home Language</b>		
Non-English Language	-0.139 ***	-0.104
<b>Mother's age at arrival (vs. U.S. Born)</b>		
0-8 years old	-0.166	-0.167 *
9-15 years old	-0.232 **	-0.236 **
16-21 years old	-0.226 ***	-0.141 **
22-28 years old	-0.234 ***	-0.153 *
29 + years old	-0.415 **	-0.233
<b>Mom's Race (vs. White Only)</b>		
Black Only	-0.388 ***	-0.224 ***
Mexican	-0.364 ***	-0.208 **
Puerto Rican	-0.263	-0.172
Other Hispanic	-0.287 ***	-0.178 **
Asian Indian	0.013	-0.100
Chinese	0.381 ***	0.254 ***
Pacific Islander	-0.186	-0.185
Other Asian	-0.091	-0.062
Other	-0.155	-0.080

Source: Early Childhood Longitudinal Study-Birth Cohort, waves 1-2 and lost to follow up between waves 1 and 2.

Intercept	0.620 ***	0.064
<b>R<sup>2</sup></b>	0.171	0.216

## Regression Results:

- Home Resources are important:
  - Higher income associated with higher scores.
  - Mother's education is associated with higher scores.
  - Children with private health insurance coverage have higher scores than those with no coverage or those with public insurance.

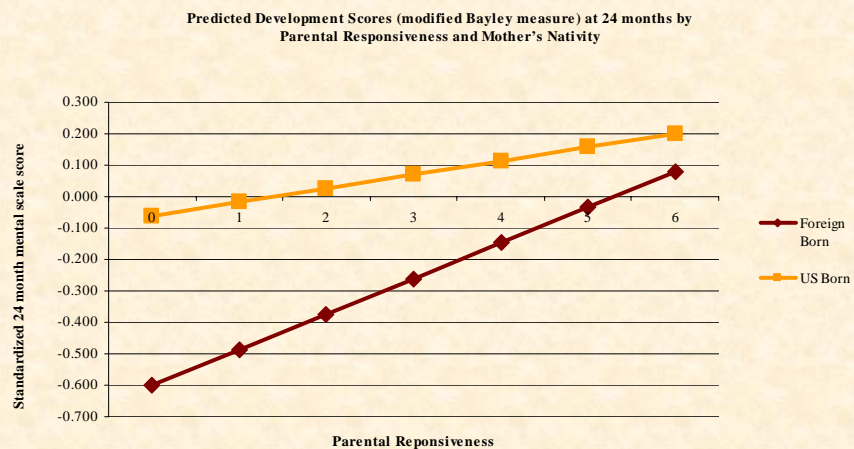
Regression of Standardized 24 Month Mental Scale Score with Mother's Age at Arrival

	Model 4	Model 5
	$\beta$	$\beta$
<b>Mom's Education (vs. less than High School)</b>		
High School Graduate or Equal	-0.017	-0.031
Some College	0.055	0.020
Bachelors Degree	0.171 **	0.126 *
Some Graduate School or more	0.356 ***	0.300 ***
<b>Family Income (vs. lowest quartile)</b>		
Second Income Quartile	0.021	0.019
Third Income Quartile	0.106 **	0.100 *
Fourth Income Quartile	0.109 *	0.092
<b>Mother's Employment (vs. Mom doesn't work)</b>		
Mother Works Full Time	0.041	0.057 *
Mother Works Part Time	0.077 *	0.079 *
<b>Health Insurance (vs. private)</b>		
Child has public insurance	-0.120 ***	-0.110 **
Child has no insurance	-0.171 *	-0.138 *
<b>Number of Older Siblings</b>	-0.049 ***	-0.043 **
<b>Family Structure (vs. Two Married Parents)</b>		
Two Cohabit Parents	-0.038	-0.039
Mom and a Male Figure	-0.027	-0.035
Single Mom	-0.015	-0.016
<b>Home Environment</b>		
Parental Play		0.061
Parental Responsiveness		0.059 ***
Reading Books to Child		0.089 ***
Intercept	0.701 ***	0.064
<b>R<sup>2</sup></b>	0.203	0.216

Source: Early Childhood Longitudinal Study-Birth Cohort, waves 1-2 and lost to follow up between waves 1 and 2.

## Regression Results:

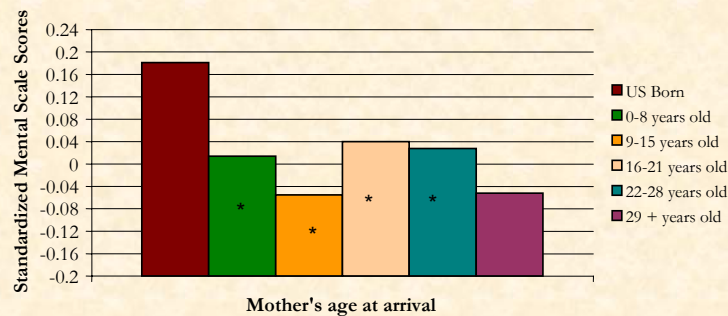
- Home Environment is important and reduces variation by mother's nativity and race/ethnicity.
- Interaction of parental responsiveness and mother's nativity suggests gaps in cognitive development are highest at the lowest levels of responsiveness.



## Regression Results:

- Children's scores also vary by mother's age at arrival.
- Controlling for family resources and home environment, children whose mothers arrive as children or adolescents seem to have lower cognitive scores.
  - Selectivity of the mothers by age
  - Exposure to constraints in the United States

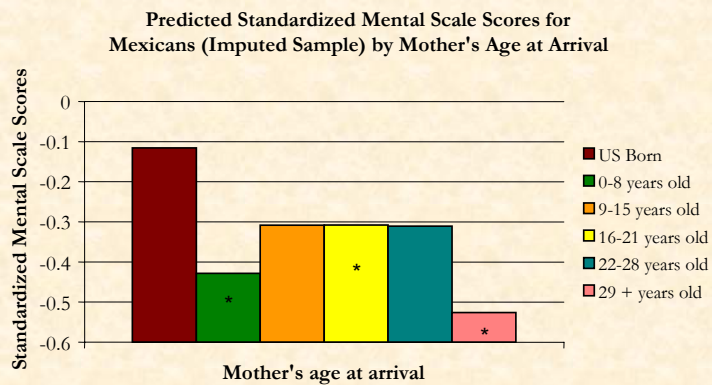
Predicted Standardized Mental Scale Scores for the Whole Sample Imputed by Mother's Age at Arrival



Source: Early Childhood Longitudinal Study-Birth Cohort .

## Regression Results:

- And, results vary by race/ethnicity suggesting important differences across groups.



Source: Early Childhood Longitudinal Study-Birth Cohort, Mexican Mothers .

## **Discussion:**

- Family resources (i.e. income), access to resources (i.e. health insurance) partially mediate the relationships between race/ethnicity, mother's nativity and children's cognitive development.
- Home environment (i.e. parental responsiveness and reading to children) also partially mediates the relationship between race/ethnicity, mother's nativity and children's cognitive development.
  - Home environment suppresses higher scores among Chinese origin and reduces difference in scores for blacks and Mexicans.

## **Discussion:**

- There is an interaction between mother's nativity and responsiveness. More responsive parenting is associated with smaller nativity gaps in cognitive scores.
- Children's developmental paths seem to diverge by mother's age at arrival (particularly among black and Mexican origin). There is no difference in the scores for children of Chinese origin mothers by mother's nativity.
- But, questions remain about the nature of tests of cognitive development
  - Lower scores among those from non-English homes persist regardless of controls for mother's age at arrival, race/ethnicity and home environment.

## **Next Steps...**

- Consider other characteristics associated with the home environment:
  - Household Composition (other adults, etc.).
  - Childcare Arrangements (will center based care be positively associated with outcomes?)
- Expand outcomes
  - Health status (how does access to care affect children's trajectories over time?)
  - School Readiness (wave 3)

**Thank You**

